

## Identifying Minerals

Scientists use different properties to identify a mineral

1. Color –Least reliable because a mineral can be many different colors.

This is caused by impurities (added substances) and the environment that the mineral is in (too much air, water, heat etc.)

Red	iron (ferric)
Orange	iron (ferric)
Yellow	iron (ferric), uranium
Green	iron (ferrous), copper, cobalt, chromium, uranium, nickel
Blue	copper, manganese, cobalt, chromium
Violet	manganese, iron (ferric)
Purple	iron (ferric), manganese
Brown	iron (ferric), uranium
Black	manganese, carbon, iron (ferric)
White	silicon dioxide
Gray	silicon dioxide

2. Luster- How a mineral reflects light.

A. Metallic- Shiny



B. Non-Metallic- Dull



3. Streak- The color of the mineral in powder form. More reliable than the outside color because it never changes. It can be found by using a ***streak plate*** made of porcelain.



4. Cleavage or Fracture- if a mineral breaks neatly into sheets or straight lines, the mineral has cleavage. If it breaks in pieces and chunks, it has fracture.

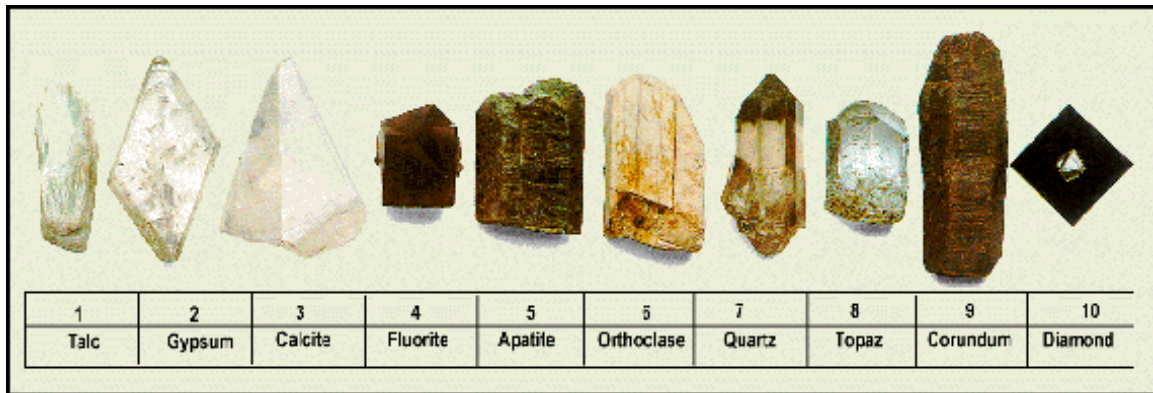


Cleavage



Fracture

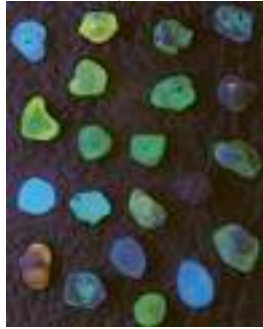
5. Hardness-The resistance of a mineral from being scratched. The Mohs Hardness Scale rates a mineral with a number. The higher the number, the more resistant (A Diamond is a 10 and Talc is a 1). If one mineral scratches another one, than it has a higher hardness.



6. Density- Mass/Volume

7. Other Special Properties that some minerals have, (not all)

A) Fluorescence



B) Chemical Reactivity



Phosphorous

C) Optical Properties

## D) Magnetism



## E) Taste



Halite has a salty taste

## F) Radioactivity (unstable atoms)